



Attorney Docket No.: I0002/204409

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Gibbon et al.

Serial No.: 09/980,068

Group Art Unit:

Filed: November 28, 2001

Examiner:

For: DIGITAL PROJECTION EQUIPMENT  
AND TECHNIQUES

Assistant Commissioner for Patents  
U.S. Patent and Trademark Office  
P.O. Box 2327  
Arlington, VA 22202

<b>CERTIFICATE OF MAILING UNDER 37 C.F.R. § 1.8(a)</b>
I hereby certify that this correspondence is being deposited with the United States Postal Service to Assistant Commissioner of Patents, P.O. Box 2327, Arlington, VA 22202, via First Class mail, on this <u>11</u> day of January 2002.

**PRELIMINARY AMENDMENT**

Dear Sir:

Please preliminarily amend the above-identified application as follows. For the Examiner's convenience a marked up version of the amendments is attached as Attachment A.

**IN THE DESCRIPTION**

Please replace the paragraph beginning on page 1, line 4 with the following paragraph:

**REFERENCE TO PROVISIONAL APPLICATIONS**

This application is based on and hereby refers to U.S. Provisional Patent Application Serial No. 60/215,715, filed July 3, 2000, having the same title as appears above, and U.K. Patent Application No. 0007891.5, filed March 31, 2000, entitled Edge Masking.

Please replace the paragraph beginning on page 4, line 23 with the following paragraph:

The combination of superimposition and tiling of sub-images provides high spatial resolution without significantly increasing system size, cost, or complexity. A system using four SLMs, each of 1280 x 1024 pixels, for example, arranges as two tiles, each composed of two superimposed SLMs. This arrangement results in a final screen resolution equivalent to approximately 1800 (vertical) and 2750 (horizontal) pixels through one projection lens, alone presenting a substantial increase in resolution.

Please replace the paragraph beginning on page 9, line 3 with the following paragraph:

Additional masks 205 typically cannot be introduced in the image plane, as they may clip the SLM image and reduce the resulting picture size. However, in parallel planes displaced from the image plane, it is possible to introduce a mask to affect only the illumination cones rather than the image size. Doing so permits modification of the image illumination along the "overlap" side so as to reduce the overlap intensity.

#### IN THE CLAIMS

Please add the following new claims:

20. (New) A method of projecting a plurality of images, the method comprising:

premodulating light from a light source by at least one premodulator;  
conveying light from the premodulator to a first SLM to produce a first sub-image;

conveying light from the premodulator to a second SLM to produce a second sub-image; and

combining the first sub-image and the second sub-image in a tiling mechanism to create a tiled image.

21. (New) The method of claim 20, further comprising:

conveying the tiled image through an edge mask to a projection lens.

22. (New) The method of claim 20, wherein the light source comprises a plurality of light sources.

23. (New) The method of claim 20, wherein the light is premodulated by two separate premodulators and a first premodulator premodulates light to the first SLM and a second premodulator premodulates light to the second SLM.

24. (New) A projection system, comprising:

a light source for producing a light beam;

a premodulator for premodulating the light beam;  
a first SLM for modulating the light beam to produce a first sub-image;  
a second SLM for modulating the light beam to produce a second sub-image; and  
a tiling mechanism for combining the first sub-image and the second sub-image to create a tiled image.

25. (New) The projection system of claim 24, wherein the tiled image contains an overlap region where the first sub-image and the second sub-image overlap and the projection system further comprises an edge mask for blending the overlap region.

26. (New) The projection system of claim 24, further comprising a projection lens for projecting the tiled image.

27. (New) The projection system of claim 24, wherein the light source comprises a plurality of light sources.

Serial No. 09/980,068  
Entitled "Digital Projection Equipment and Techniques"  
Filed: November 28, 2001



REMARKS

Applicants respectfully request allowance of the claims and issuance of a patent in due course.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Michael J. Turton".

Michael J. Turton  
Reg. No. 40,852

Date: January 11, 2002

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ATTACHMENT A

**Marked Up Version of Showing Amendments**

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PENDING PUBLICATION